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**D E C I S I O N**  
**of 5 March 2001**

**Case Number:** T 1198/97 - 3.3.5

**Application Number:** 90203444.6

**Publication Number:** 0437888

**IPC:** B01D 1/16

**Language of the proceedings:** EN

**Title of invention:**

Computer-controlled spray-drying process

**Patentee:**

UNILEVER N.V., et al

**Opponent:**

HENKEL KGaA  
PROCTER & GAMBLE E.T.C.

**Headword:**

Spray drying/UNILEVER

**Relevant legal provisions:**

EPC Art. 54(1), 113(1), 114(1)  
EPC R. 67, 76

**Keyword:**

"Novelty - yes, no implicit disclosure"  
"Procedural violation - yes, introduction of evidence by  
opposition division in oral proceedings without indicating  
relevant facts thereof"  
"Competence for requests concerning the minutes of first  
instance oral proceedings"

**Decisions cited:**

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**Catchword:**

When a document published several years after the priority date of the patent-in-suit is introduced by the Opposition Division of its own motion as evidence for the common general knowledge at the priority date of the patent-in-suit, in order to safeguard the parties' right to be heard under Article 113(1) EPC, the parties have to be made aware of the publication date of the document, if this date cannot be ascertained from the document itself (6. of the Reasons).

2. Even when an appeal has been filed against a decision of a first instance department, only the department of first instance before which the oral proceedings took place is competent and at the same time also obliged to decide in first instance on a request concerning the contents of the minutes of oral proceedings held before it (7. of the Reasons).



Case Number: T 1198/97 - 3.3.5

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.5**  
**of 5 March 2001**

**Appellants:** UNILEVER NV  
(Proprietors of the patent) Weena 455  
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UNILEVER Plc  
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London EC4 4BQ (GB)

**Representative:** Waldren, Robin Michael  
Lloyd Wise, Treager & Co.  
Commonwealth House  
1-19 New Oxford Street  
London WC1A 1LW (GB)

**Respondents:**  
(Opponent 01) HENKEL KGaA  
Henkelstrasse 67  
D-40191 Düsseldorf-Holthausen (DE)

(Opponent 02) PROCTER & GAMBLE E.T.C  
Temselaan, 100  
1820 Strombeck-Bever (BE)

**Representative:** Peet, Jillian Wendy  
Procter & Gamble Technical Centres Limited  
Whitley Road  
Longbenton  
Newcastle upon Tyne NE12 9TS (GB)

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 18 September 1997  
revoking European patent No. 0 437 888 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** R. K. Spangenberg

**Members:** G. J. Wassenaar

M. B. Günzel

## Summary of Facts and Submissions

I. The appeal is from the decision of the Opposition Division to revoke European patent No. 0 437 888, which was granted in response to European patent application No. 90 203 444.6.

II. The basis for the contested decision was the patent as granted. The only independent claim of the patent in suit read as follows:

"A spray-drying process which comprises feeding an aqueous slurry to a spray drying zone, contacting the slurry with drying air to form a spray dried powder, in which the moisture content of the powder is automatically maintained at a preset level by measuring its actual value and feeding it to a computer which at least controls the temperature and/or flow of the drying air as a function of past values of said flow and/or temperature and as a function of current and past values of the powder moisture content."

This claim was rejected on the ground that its subject-matter lacked novelty over

D1: Fette, Seifen, Anstrichmittel, 87, No. 10, 1985, pages 417 to 420.

III. The Opposition Division held that D1 implicitly disclosed that the temperature and/or flow of the drying air was controlled by the past values of said flow and/or temperature and a function of current and past values of the powder moisture content. Their conclusion was at least partly based on the fact that both in D1 and the patent in suit a regression analysis

was used to determine the factors in the algorithm of the mathematical controlling model connecting the input parameters, of which temperature and flow of the drying air were explicitly mentioned, and the product parameters, of which the moisture content of the product was explicitly mentioned. In their opinion the method of regression analysis implied that measured current and past values of the relevant parameters recorded in the computer were used to control the input parameters. In this respect reference was made to

D3: Überwachung und Fehlerdiagnose, R. Isermann, pages 12 and 13.

This document was introduced by the Opposition Division during oral proceedings on 10 September 1997. By letter dated 11 September 1997 the representative of the appellant submitted that he had objected to the introduction of D3 during the oral proceedings for being late and requested to record this in the minutes of the oral proceedings.

- IV. With the statement of the grounds of appeal, the appellant filed two new documents relating to regression analysis and a copy comprising bibliographic data concerning D3. According to these data D3 was published in 1994.
  
- V. In his reply, respondent Henkel(01) made reference to two chapters from "Ullmanns Encyklopädie der technischen Chemie", Volume 4, 1974 in order to show that the information in D3 with respect to regression analysis belonged to the common general knowledge of the skilled person.

VI. Oral proceedings, which were not attended by respondent Procter & Gamble (O2), took place on 5 March 2001.

VII. The appellant's arguments can be summarized as follows:

With respect to the substantive issues, the appellant argued that D1 did not disclose the essential feature of claim 1, that recorded past values of flow and/or temperature of the drying air and current and past values of the powder moisture content were used to control the moisture content of the powder. The current and past values of the controlling parameters mentioned in claim 1 were based on the measurements during the actual spray drying process and must be differentiated from the earlier measurements to set up the control algorithm for the computer. Regression analysis, based on earlier experiments, was used in the set up of the controller. In D1 regression analysis was also only disclosed as a tool to set up the controller. D1 did not disclose any algorithm for controlling the process and comprised no indication for using past values of parameters of the actual production process for controlling the current feed parameters.

The appellant further argued that because of the late introduction of D3, the decision was based on evidence on which the appellant had no opportunity to present adequate comments and therefore violated Article 113 (1)EPC. D3 was not only presented extremely late in the proceedings, but its content was also of specialist technical nature and in German, a language which was not the language of the proceedings. For an appropriate reply consultation of technical experts of the appellant would have been necessary. Although the Opposition Division indicated that D3 was only

mentioned to illustrate common general knowledge it was apparent from the decision that the information in D3 was a main ground for revocation. Moreover, the publication date of D3 was not presented during the oral proceedings and could not have been checked in the short time given during oral proceedings to present comments. If presented in due time it could have been made clear to the Opposition Division that because of its publication date a long time after the priority date of the patent in suit it was not suitable to illustrate common general knowledge at the priority date, and that its information was not relevant for controlling a process according to D1. A comprehensive discussion of D3 could have had an impact on the Opposition Division's decision and have prevented this appeal.

VIII. The respondent 01 argued essentially as follows:

D1 disclosed that the relevant spray drying parameters were measured continuously and recorded in the computer controlling the process. Past and actual values of temperature and flow of the drying gas as well as the past and actual values of the moisture content of the product were thus available for controlling the process. Computer control was in fact a simulation of conventionally applied manual control, whereby the controller regulated the input parameters taking into account present and past values of the product parameters. A computer program used to replace the manual controller would therefore also necessarily have to take into account actual and past values of these parameters. Furthermore D1 specifically disclosed the use of regression analyses for determining the relevant factors in the controlling algorithm, which implied



that past values were also used to control the relevant parameters. The process of D1 could not be controlled if only current values of the parameters were used. Factors in the algorithm based on the applied model were continuously recalculated during the actual process.

With respect to the violation of the right to be heard the respondent 01 argued that during the oral proceedings before the Opposition Division the appellant was given time to read D3 and to present comments. Literature presented in German, one of the official languages of the EPO, should be understandable for a professional representative of the appellant. Moreover, the essential feature of D3 was a mathematical equation, the meaning of which could be understood without detailed knowledge of the language.

- IX. Respondent 02 indicated that they were in full agreement with the decision of the Opposition Division and the comments of respondent 01.
  
- X. The appellant requested that the decision under appeal be set aside, that the case be remitted to the Opposition Division for further prosecution on the basis of the patent as granted as appellant's main request or on the basis of any of the appellant's auxiliary requests, filed with the letter dated 1 February 2001, taken in their numerical order, and that the appeal fee be reimbursed.

The respondents requested that the appeal be dismissed.

Respondent 02 further requested that should the revocation of the patent not be upheld, the case be

remitted to the Opposition Division for a full consideration of the issue of inventive step.

### Reasons for the Decision

1. According to claim 1 of the patent in suit the actual value of the moisture content of the spray dried powder is measured and fed to a computer controlling the temperature and/or flow of the drying air as a function of past values of said flow and/or temperature and as a function of current and past values of the powder moisture content. In agreement with the description of the invention and the uncontested submissions made by the appellant, the Board holds that the expression "**past values**" in "past values of said flow and/or temperature and past values of the powder moisture content" in claim 1 only relates to values of measurements performed during the actual process and not to past values from earlier experiments made for designing the controller for the computer as outlined on page 3, lines 21 to 48 of the patent specification. Interpreted in a realistic and technically meaningful way, claim 1 is thus limited to a process in which the past values of the parameters are those measured and fed to the computer during the actual spray drying process.
  
2. D1 discloses a spray-drying process which comprises feeding an aqueous slurry to a spray drying zone, contacting the slurry with drying air to form a spray dried powder. The input parameters, such as the temperature and flow of the drying air, and the product parameters, such as the moisture content of the powder, are continuously measured and fed to a computer

controlling the input parameters to maintain the product parameters at a preset level. The controlling model for the computer was developed on the basis of careful process observation and test experiments. The factors in the algorithm of the controlling model were determined by using regression analysis (page 418, right-hand column). Details of the actual algorithm are not disclosed. With respect to the automatic controlling of the process it is observed that it was difficult to take into account the delay between the slurry preparation and the final powder (page 419, left-hand column, first paragraph). A solution for this problem is not disclosed. The parties agreed that D1 did not explicitly disclose the use of past values of the input parameters and the product parameters for controlling the input parameters, but respondent O1 maintained that this followed from the use of regression analysis for determining the factors in the algorithm of the controlling model in the computer and argued that it was not possible to control the process without using past values of the parameters. The Board cannot accept the respondents' position in this respect for the following reasons.

3. In D1 the use of regression analysis is only disclosed for determining the control model used by the computer. It is obvious that regression analysis for the set up of the control model can only be based on data obtained in earlier experiments. These data are, however, not the past values of the actual process controlled by the computer. Since D1 does not disclose the use of regression analysis in the computer program during the actual process under control there is also no implicit disclosure in D1 for the use of past values of actual process parameters for controlling the temperature

and/or flow of the drying air. For the same reason, additional literature concerning regression analysis as presented in D3 and the cited chapters from Ullmanns Encyklopädie der technischen Chemie, cannot have any impact on the disclosure of D1 with respect to the actual control of the input parameters in the spray drying process.

4. The respondent O1's allegation that it was not possible to perform a continuous process without the use of past values in the controller, was not supported by any evidence. In the Board's view it is not a priori evident that process control by a computer requires a control model in the computer program that uses past values of the input parameters and past values of the product parameters for regulating the input parameters. Thus, without further evidence, the Board must conclude that D1 does not unambiguously disclose the process according to claim 1 as granted. The subject-matter of claim 1 is, therefore, novel within the meaning of Article 54(1) EPC.
5. The issue of inventive step was neither treated in the decision under appeal nor discussed during oral proceedings before the Opposition Division. Taking further into account that more than ten prior art documents have been cited of which, according to the minutes, only two have been discussed during said oral proceedings, the Board considers it appropriate to exercise its power under Article 111(1)EPC and to remit the case to the Opposition Division to examine the issue of inventive step.
6. An important point in the reasons of the contested decision was the Opposition Division's conviction that

regression analysis was, by definition, a mathematical model equating to graphical extrapolation of future results from a knowledge of past results. In order to show this the Opposition Division introduced D3 into the proceedings (point 12 of the contested decision).

The Board accepts that under Article 114(1) EPC the Opposition Division has the power to present new evidence of its own motion. In such a case, however, the parties have to be given sufficient time to consider the new evidence and have to be informed of all relevant aspects of this evidence. In the present case D3 was introduced for the first time during oral proceedings. Although some time was given to the parties to prepare their comments on this new citation, as regards its content, it is at least doubtful whether this period of time was sufficient, taking into account that the content of D3 is of a specialist technical nature, its relevance for the novelty of the subject matter of claim 1 not being immediately apparent, and that the whole oral proceedings took only two hours. In this respect the Board notes that the definition of regression analysis relied upon by the Opposition Division is not explicitly present in D3 but seems to have been derived from the mathematical equation (4) on page 13 of D3. More importantly, however, according to the submissions of the appellant and the facts on file the Opposition Division did not indicate that D3 did not belong to the state of the art and was only published about five years after the priority date of the patent in suit. This having now been shown by the appellant, who furnished a copy of the relevant page of D3 (which was obviously not handed out to the parties by the Opposition Division in the oral proceedings and which is contained nowhere in the opposition file), the

Board doubts whether D3 was suitable as evidence for the skilled person's understanding of the expression "regression analysis" used in D1.

The Board does not exclude a priori that under particular circumstances even a document published several years after the priority date can be used as evidence for common general knowledge at the priority date of a patent application, but it is evident that in such a situation the publication date of the document can be a decisive factor for the assessment of the case. It is therefore of utmost importance that the parties are made aware of this, so that they are able to argue as to whether or not the document can be used as evidence of common general knowledge at the priority date and that the special circumstances for referring to a later published document are explained.

By failing to indicate the publication date of D3 the Opposition Division thus deprived the appellant of a potentially successful line of attack against the Opposition Division's argumentation and thereby seriously violated the appellant's right to be heard under Article 113(1) EPC. This amounts to a substantial procedural violation within the meaning of Rule 67 EPC. It cannot be ruled out that the appellant would have convinced the Opposition Division that D3 cannot be used as evidence for the existing common general knowledge at the priority date, on which the appealed decision is crucially based, had he been informed of its publication date or had he had time to verify it.

7. Although there is no mention of it in the minutes of the oral proceedings before the Opposition Division as they stand, in the circumstances of the present case

the Board accepts that the representative of the appellant indeed objected during the oral proceedings to the introduction and consideration of D3 by the Opposition Division in these oral proceedings. The day after the oral proceedings the appellant sent a letter to the Opposition Division requesting to record in the minutes of the oral proceedings some statements of protest against this which according to him were made by the appellant's representative during the oral proceedings. This request does not appear to have been considered by the Opposition Division when drafting the minutes nor is there any trace of any other later reaction of the Opposition Division to the said request, such as e.g. a decision with regard to a correction of, viz. an addition to the minutes, should the appellant's request only have come to the knowledge of the Opposition Division when the minutes had already been despatched. Even when an appeal has been filed, only the department of first instance before which the oral proceedings took place is competent and at the same time also obliged to decide in first instance on a request concerning the contents of the minutes of oral proceedings held before it, firstly because it is their competence and duty under Rule 76 EPC to draw up the minutes correctly and completely and secondly because, if anybody, only the members of this department know what has happened and has been said or not during the oral proceedings before it. The devolutive effect of the appeal does not affect this competence. What is devolved with the appeal is the subject-matter decided by the appealed decision. Had the Opposition Division in the present case promptly reacted to the appellant's request, i.e. at a point in time at which the memory of the members of the Opposition Division of the course of the oral proceedings before it was still fresh, a

decision by the Opposition Division on said request could have provided a reliable basis for the Board's decision as to what happened or did not happen in the oral proceedings. As a consequence of the inactivity of the Opposition Division with respect to the appellant's request and also because it is to some extent plausible from the prompt written reaction of the appellant to the Opposition Division the day after the oral proceedings, the Board cannot now but accept the appellant's submission that he had objected to the consideration of D3 in the oral proceedings and asked to verify the exact publication date of D3. Under these circumstances it cannot be denied that there is, in the present case, a causal link between the violation of the appellant's right to be heard and the necessity to appeal the decision of the Opposition Division rendering reimbursement of the appeal fee equitable.

## **Order**

### **For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the Opposition Division for further prosecution.
3. Reimbursement of the appeal fee is ordered.

The Registrar:

The Chairman:



S. Hue

R. Spangenberg